



## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2022-1061; Project Identifier AD-2022-00441-T; Amendment 39-22271; AD 2022-25-15]**

**RIN 2120-AA64**

#### **Airworthiness Directives; The Boeing Company Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

**SUMMARY:** The FAA is adopting a new airworthiness directive (AD) for all The Boeing Company Model 737-100, -200, -200C, -300, -400, and -500 series airplanes. This AD was prompted by a report indicating that a crack was found in one of the holes of the wing rear spar lower chord at the main landing gear (MLG) aft fitting at a certain wing buttock line (WBL). This AD requires repetitive open hole high frequency eddy current (HFEC) inspections or surface HFEC and ultrasonic (UT) inspections for cracking of the wing rear spar lower chord at the MLG aft fitting at a certain WBL, and applicable on-condition actions. The FAA is issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:**

*AD Docket:* You may examine the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2022-1061; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

*Material Incorporated by Reference:*

- For service information identified in this final rule, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; Internet [myboeingfleet.com](https://myboeingfleet.com).

- You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2022-1061.

**FOR FURTHER INFORMATION CONTACT:** Wayne Ha, Aerospace Engineer, Airframe Section, FAA, Los Angeles ACO Branch, 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5238; email: [wayne.ha@faa.gov](mailto:wayne.ha@faa.gov).

**SUPPLEMENTARY INFORMATION:****Background**

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to all The Boeing Company Model 737-100, -200, -200C, -300, -400, and -500 series airplanes. The NPRM published in the *Federal Register* on September 8, 2022 (87 FR 54922). The NPRM was prompted by a report indicating that a crack was found in one of the holes of the wing rear spar lower chord at

the MLG aft fitting at WBL 157 on a Model 737-400 airplane. In the NPRM, the FAA proposed to require repetitive open hole HFEC inspections or surface HFEC and UT inspections for cracking of the wing rear spar lower chord at the MLG aft fitting at a certain WBL, and applicable on-condition actions. The FAA is issuing this AD to address cracking in the rear spar lower chord at a fastener common to the MLG aft support fitting. This condition, if not addressed, could result in the inability of the rear spar lower chord to sustain limit loads, resulting in reduced structural integrity of the airplane and possible loss of control of the airplane.

## **Discussion of Final Airworthiness Directive**

### **Comments**

The FAA received comments from The Air Line Pilots Association, International (ALPA), who supported the NPRM without change. The FAA received comments from an individual that were outside the scope of this rulemaking.

The FAA received an additional comment from Boeing. The following presents the comment received on the NPRM and the FAA's response.

### **Effect of Winglets on Accomplishment of the Proposed Actions**

Aviation Partners Boeing stated that accomplishing Supplemental Type Certificate (STC) ST01219SE does not affect the actions specified in the proposed AD.

The FAA concurs with the commenter. The FAA has redesignated paragraph (c) of the proposed AD as paragraph (c)(1) of this AD and added paragraph (c)(2) to this AD to state that installation of STC ST01219SE does not affect the ability to accomplish the actions required by this AD. Therefore, for airplanes on which STC ST01219SE is installed, a "change in product" alternative method of compliance (AMOC) approval request is not necessary to comply with the requirements of 14 CFR 39.17.

## **Request for a Correction to Paragraph (h) of This AD**

Boeing requested that a reference to “paragraph (h) of this AD” within paragraph (h) of this AD be corrected to read “paragraph (i) of this AD.” Boeing noted that the reference should be to the exceptions stated in paragraph (i) of this AD.

The FAA agrees with the request to correct the error. The reference to “paragraph (h) of this AD” within paragraph (h) of this AD has been corrected to read “paragraph (i) of this AD.”

## **Conclusion**

The FAA reviewed the relevant data, considered any comments received, and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products. Except for minor editorial changes, and any other changes described previously, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator.

## **Related Service Information under 1 CFR Part 51**

The FAA reviewed Boeing Alert Requirements Bulletin 737-57A1353 RB, dated February 10, 2022. This service information specifies procedures for repetitive open hole HFEC inspections or surface HFEC and UT inspections for cracking, and applicable on-condition actions. On-condition actions include installing fasteners and repair. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in ADDRESSES.

## **Costs of Compliance**

The FAA estimates that this AD would affect 69 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

### Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Open hole HFEC inspection	30 work-hours X \$85 per hour = \$2,550 per inspection cycle	\$0	\$2,550 per inspection cycle	Up to \$175,950 per inspection cycle
Surface HFEC/UT inspections	4 work-hours X \$85 per hour = \$340 per inspection cycle	\$0	\$340 per inspection cycle	Up to \$23,460 per inspection cycle

The FAA estimates the following costs to do any necessary fastener installations that would be required based on the results of the inspection. The agency has no way of determining the number of aircraft that might need these installations:

### On-condition costs

Action	Labor cost	Parts cost	Cost per product
Install fasteners	1 work-hour X \$85 per hour = \$85	\$0*	\$85

\*The FAA has no definitive data on the parts costs for fasteners.

The FAA has received no definitive data on which to base the cost estimates for the on-condition repairs specified in this AD.

### Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority

because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **The Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

### **PART 39 - AIRWORTHINESS DIRECTIVES**

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

- 2. The FAA amends § 39.13 by adding the following new airworthiness directive:

**2022-25-15 The Boeing Company:** Amendment 39-22271; Docket No. FAA-2022-1061; Project Identifier AD-2022-00441-T.

**(a) Effective Date**

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(b) Affected ADs**

None.

**(c) Applicability**

(1) This AD applies to all The Boeing Company Model 737-100, -200, -200C, -300, -400, and -500 series airplanes, certificated in any category.

(2) Installation of Supplemental Type Certificate (STC) ST01219SE does not affect the ability to accomplish the actions required by this AD. Therefore, for airplanes on which STC ST01219SE is installed, a “change in product” alternative method of compliance (AMOC) approval request is not necessary to comply with the requirements of 14 CFR 39.17.

**(d) Subject**

Air Transport Association (ATA) of America Code 57, Wings.

**(e) Unsafe Condition**

This AD was prompted by a report indicating that a crack was found in one of the holes of the wing rear spar lower chord at the main landing gear (MLG) aft fitting at wing buttock line (WBL) 157. The FAA is issuing this AD to address cracking in the rear spar lower chord at a fastener common to the MLG aft support fitting. This condition, if not addressed, could result in the inability of the rear spar lower chord to sustain limit loads, resulting in reduced structural integrity of the airplane and possible loss of control of the airplane.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Required Actions for Group 1 Airplanes**

For airplanes identified as Group 1 in Boeing Alert Requirements Bulletin 737-57A1353 RB, dated February 10, 2022: Within 120 days after the effective date of this AD, inspect the airplane and do all applicable on-condition actions using a method approved in accordance with the procedures specified in paragraph (j) of this AD.

**(h) Required Actions for Group 2 and Group 3 Airplanes**

For airplanes identified as Group 2 and Group 3 in Boeing Alert Requirements Bulletin 737-57A1353 RB, dated February 10, 2022: Except as specified by paragraph (i) of this AD, at the applicable times specified in the “Compliance” paragraph of Boeing Alert Requirements Bulletin 737-57A1353 RB, dated February 10, 2022, do all applicable actions identified in, and in accordance with, the Accomplishment Instructions of Boeing Alert Requirements Bulletin 737-57A1353 RB, dated February 10, 2022.

Note 1 to paragraph (h): Guidance for accomplishing the actions required by this AD can be found in Boeing Alert Service Bulletin 737-57A1353, dated February 10, 2022, which is referred to in Boeing Alert Requirements Bulletin 737-57A1353 RB, dated February 10, 2022.

**(i) Exceptions to Service Information Specifications**

(1) Where the Compliance Time columns of the tables in the “Compliance” paragraph of Boeing Alert Requirements Bulletin 737-57A1353 RB, dated February 10, 2022, use the phrase “the original issue date of Requirements Bulletin 737-57A1353 RB,” this AD requires using “the effective date of this AD.”

(2) Where Boeing Alert Requirements Bulletin 737-57A1353 RB, dated February 10, 2022, specifies contacting Boeing for repair instructions: This AD requires doing the repair using a method approved in accordance with the procedures specified in paragraph (j) of this AD.



**(j) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Los Angeles ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (k) of this AD. Information may be emailed to:

9-ANM-LAACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair, modification, or alteration required by this AD if it is approved by The Boeing Company Organization Designation Authorization (ODA) that has been authorized by the Manager, Los Angeles ACO Branch, FAA, to make those findings. To be approved, the repair method, modification deviation, or alteration deviation must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

**(k) Related Information**

For more information about this AD, contact Wayne Ha, Aerospace Engineer, Airframe Section, FAA, Los Angeles ACO Branch, 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5238; email: wayne.ha@faa.gov.

**(l) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Boeing Alert Requirements Bulletin 737-57A1353 RB, dated February 10, 2022.

(ii) [Reserved]

(3) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; Internet [myboeingfleet.com](http://myboeingfleet.com).

(4) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, [fr.inspection@nara.gov](mailto:fr.inspection@nara.gov), or go to: [www.archives.gov/federal-register/cfr/ibr-locations.html](http://www.archives.gov/federal-register/cfr/ibr-locations.html).

Issued on November 30, 2022.

Christina Underwood, Acting Director,  
Compliance & Airworthiness Division,  
Aircraft Certification Service.

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